The Dolphin PCI-SCI Adapter Card is an industry standard, high-performance solution for clustered systems intercon- nect, bus bridging and system area network applications.

The Dolphin PCI-SCI Adapter Card D331 is an economical way to build system area networks for clustering PCs, workstations and servers. SCI (scaleable coherent interface) is also an ideal technology for high-availability scalable database systems and other mission-critical enterprise servers.

SCI's industry leading throughput rates and low latency result in a major improvement in application performance and scalability. The 1.333 GBytes/s link speed (bi-directional) of the PCI-SCI Adapter Card makes it an ideal platform for moving large volumes of data. The ultra-low 1.4 microsecond latency application-to-application reduces the overhead of inter-node control messages, leading to the best possible scalability for multi-node applications.

The superior performance of Dolphin's PCI-SCI Adapter Card is achieved by taking maximum advantage of the SCI standard with its fast point-to-point links and bypassing of time-consuming operating system calls and protocol software overhead, required in traditional networking approaches.

For high-availability requirements, the SCI standard provides hot-swappable connections. Plus, with the use of redundant PCI-SCI Adapter Cards this technology can be used to enhance fail-over performance and increase fault tolerance, ultimately reducing down-time. Large clusters can be built using Dolphin Interconnect Adapter Cards combined with a range of scalable switches. Dolphin Interconnect also offers comprehensive software support, including the open source (GPL) SISCI API for a variety of popular operating systems.

FEATURES AND BENEFITS

- PCI Local Bus Rev. 2.2 compliant, 64/32 bits, 66/33 MHz
- ANSI/IEEE 1596-1992 scalable coherent interface (SCI) compliant
- ANSI/IEEE 1159.1 (JTAG) support
- Industry lowest latency and high data throughput efficiently support scalable clustering applications
- High-availability operation with hot-swappable connections and redundant PCI-SCI cards
- Application-level latency as low as 1.4 µs using remote shared memory access from application to remote application memory
- Supports both direct memory access (DMA) and programmed remote memory access (RMA)
- Based on latest Dolphin SCI chip technology, LC3 and PSB-66 with 128-byte packet support

Technical Specifications

Product Code
D331

Link Speeds
667 MBytes/s (1.333 GBytes/s duplex)

Performance
Up to 326 MBytes/s throughput 1.4 microsecond latency (application-to-application performance depending on PCI chipset)

Link Standard
ANSI/IEEE 1596-1992 scalable coherent interface (SCI)

PCI Specification
PCI Local Bus Revision 2.2, 64/32 bit 66/33 MHz

Topologies
Ring and switch topologies

Physical Specifications

Cable Connection
Parallel STP copper cable (0.2-10m)

Power Consumption
Static: 5W   Dynamic: 6W

Universal PCI Adapter

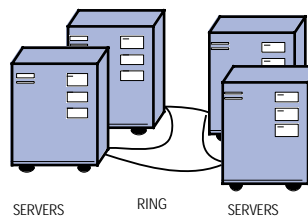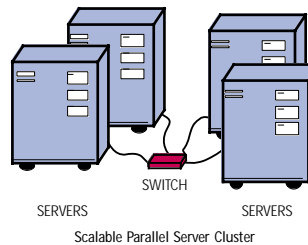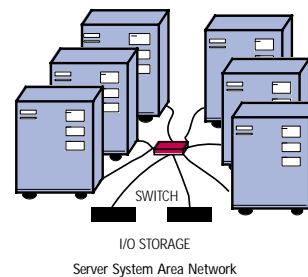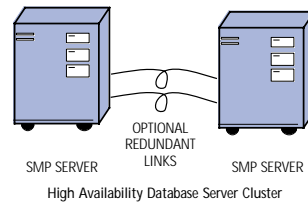**Mechanical Dimensions**
PCI specification

Operating Environment
Operating Temperature: 0˚C - 55˚C
Relative Humidity: 5% - 95% non-condensing
Altitude: 0 - 3000 meters

Software Support

Dolphin provides SDKs and drivers that support a variety of operating systems, including Windows 2000/NT/XP, Solaris, Linux, Lynx, Tru64 Unix and VxWorks. Please refer to the Downloads section of the Dolphin Interconnect web site for the latest information and downloadable software at *www.dolphinics.com*.

Chipset Support

The PCI chipset will influence your system performance. While some chipsets only support a 32bit 33MHz bus, others support wider, faster buses. Dolphin PCI adapter cards work on all types of PCI chipsets and hostbridges, but not all chipsets are equally suited. Please refer to the Support section of the Dolphin Interconnect web site for the latest information at *www.dolphinics.com*.

High Availability Database Server Cluster

Server System Area Network

Scalable Parallel Server Cluster

Dolphin Interconnect Offices

Dolphin USA
24 Prime Parkway, Suite 104
Natick, MA 01760, USA
Phone: (1) 508 652-0122
Fax: (1) 508 652-0142

Dolphin Europe & Asia
Olaf Helsets vei 6
NO-0619 Oslo, Norway
Phone: +47 23 16 70 00
Fax: +47 23 16 71 80

Internet Information
E-mail: info@dolphinics.com
Website: http://www.dolphinics.com